

WHAT WE CLAIM IS:

1. A method for selecting a GSM network service provider comprising:
scanning at least one frequency band;
receiving a Location Area Code (LAC); and
selecting a network service provider to attempt to perform a location update based on the LAC.

2. The method of claim 1, further comprising:
providing a plurality of files in a Subscriber Identity Module (SIM) of the MS,
~~wherein at least one of the plurality of files is used in selecting the network service~~
provider, and
wherein the plurality of files includes a first file dictating in what order to scan frequency bands when the MS powers up, a second file containing location areas that are to be considered as a part of a home network, a third file dictating which frequency bands to scan when the MS is in a home MCC but not within home network LACs, a fourth file dictating in what order to scan frequency bands within the home MCC, a fifth file dictating which frequency bands to scan when the MS is not in the home MCC, and a sixth file containing location areas of preferred networks.

3. A GSM network service provider selection process for a Mobile Station (MS) comprising:
providing a plurality of files on a SIM of the MS;
scanning frequency bands;

searching for a home network LAC; and
attempting to perform a location update on the home network LAC,
wherein the home network LAC is defined in a first file in a Subscriber Identity Module (SIM) of the MS.

4. The method of claim 3, wherein scanning frequency bands is performed when the MS powers on according to an order defined in a second file.

5. The method of claim 3, wherein searching for a home network LAC includes comparing a LAC found while scanning the frequency bands to the first file including location areas that are to be considered as a part of a home network.

6. The method of claim 3, wherein if the MS does not find the home network LAC, the MS searches for a preferred network LAC.

7. The method of claim 6, wherein the MS searches for a preferred network LAC by comparing a LAC found while scanning the frequency bands to a third file including a location areas of a preferred network.

8. The method of claim 6, wherein if the MS finds the preferred network LAC, the MS attempts to perform a location update on the preferred network LAC.

9. The method of claim 6, wherein if the MS does not find the preferred network LAC, the MS searches for a preferred network PLMN to attempt to perform a location update.

10. The method of claim 3, wherein the MS determines whether a last network was an optimal service provider before scanning the frequency bands.

11. The method of claim 10, wherein if the last network was a home MCC or home band of the MS, the MS scans a frequency band last scanned and searches for the home network LAC to perform a location update.

12. The method of claim 11, wherein if the MS does not find the home network LAC, the MS searches for the last network.

13. The method of claim 12, wherein if the MS finds the last network, the MS attempts to perform a location update on the last network.

14. The method of claim 3, wherein the MS prepares a file including LACs found during scanning the frequency bands.

15. The method of claim 14, wherein the file including LACs found is used to find the home network LAC.

16. A reselection process in a GSM network for selecting a network service provider comprising:

providing a first file listing frequency bands to scan when the MS is in a home MCC;
scanning the frequency bands listed in the first file when a period defined by a home PLMN timer in a SIM of the MS expires; and
searching for a home network LAC utilizing a second file listing location areas that are to be considered as a part of a home network to perform a location update.

17. The method of claim 16, wherein utilizing the second file includes comparing a LAC found during scanning the frequency bands to the second file.

18. The method of claim 16, wherein if the MS does not find the home network LAC, the MS remains on an incumbent network.

19. A reselection process in a GSM network for selecting a network service provider comprising:

providing a first file listing frequency bands to scan when the MS is not in a home MCC in a SIM of the MS; and

determining whether the MS is on a home LAC when a period defined by a home PLMN timer in a SIM of the MS expires,

wherein if the MS is on the home LAC, the MS remains on an incumbent network, and if the MS is not on the home LAC, the MS determines if the MS is in the home MCC.

20. The method of claim 19, wherein if the MS is in the home MCC, the MS remains on the incumbent network.

21. The method of claim 19, wherein if the MS is not in the home MCC, the MS scans the frequency bands listed in the first file, prepares a second file listing LACs found during scanning, and searches for a preferred network LAC to attempt to perform a location update.

22. The method of claim 21, wherein the MS utilizes a third file including a list of location areas of preferred network to search for the preferred network LAC.

23. The method of claim 22, wherein if the MS does not find the preferred network LAC, the MS searches for a preferred network PLMN.

24. The method of claim 23, wherein if the MS does not find the preferred network PLMN, the MS remains on the incumbent network.

25. A reselection process in a GSM network for selecting a network service provider for a MS when the MS loses a network signal comprising:

providing a plurality of files on a SIM of the MS;

scanning frequency bands according to an order in a first file;

searching for a home network LAC; and

attempting to perform a location update on the home network LAC,

wherein the home network LAC is defined in a second file in the SIM of the MS.

26. The method of claim 25, wherein the MS scans the frequency bands when the MS loses the network signal while attached to a home network.

27. The method of claim 25, wherein if the MS does not find the home network LAC, the MS searches for a preferred network LAC.

28. The method of claim 27, wherein if the MS does not find the preferred network LAC, the MS searches for a preferred network PLMN.

29. The method of claim 25, wherein the MS scans the frequency bands scans when the MS loses the network signal while attached to a network other than a home network.

30. The method of claim 29, wherein the MS determines whether the MS is in a home MCC before scanning the frequency bands.

31. The method of claim 30, wherein if the MS is in the home MCC, the MS scans the frequency bands according to a third file that dictates which frequency bands to scan and a fourth file that dictates in what order to scan the frequency bands within a home MCC.

32. The method of claim 30, wherein if the MS is not in the home MCC, the MS scans the frequency bands according to an order in a fifth file that dictates in what order to scan frequency bands when the MS is not in a home MCC.

33. The method of claim 25, wherein if the MS does not find the home network LAC, the MS searches for a preferred network LAC.

34. The method of claim 27, wherein if the MS does not find the preferred network LAC, the MS searches for a preferred network PLMN.

35. A reselection process in a GSM network for selecting a network service provider for a MS supporting multi frequency bands comprising:

determining a MCC in which the MS is operating; and
limiting frequency bands to scan based on the MCC.